



REMARKS/ARGUMENTS

PATENT & TRADEMARK OFFICE Extraordinary reconsideration of this application, in light of the following discussion, is respectfully requested.

Claims 1 and 3-5 are pending.

The Office Action rejects Claims 1, 2 and 4 under 35 U.S.C. § 103(a) over JP 06-198685 (JP '685) in view of U.S. Patent 5,552,098 to Kudo et al. and U.S. Patent 5,427,520 to Shimizu et al., Claims 3 and 5 under 35 U.S.C. § 103(a) over JP '685 in view of Kudo et al. and Shimizu et al. and further in view of JP 07-068605 (JP '605). These rejections are respectfully traversed.

Before considering the rejections under 35 U.S.C. § 103, it is believed that a brief review of the subject matter of independent Claim 1 would be helpful. Independent Claim 1 includes a mold apparatus for injection molding a disk substrate. The mold apparatus includes a cavity into which a molten resin is injected through a sprue bushing and a gate. A signal transfer stamper is disposed on a fixed die side of the cavity. The sprue bushing is disposed on the fixed die side and a gate cutter is disposed on a movable die side. A projected portion is formed at a tip of the sprue bushing and a center hole molding portion is provided at an outer circumference of the sprue bushing. A recessed portion is formed at a tip of the gate cutter opposite to the projection portion of the sprue bushing and the gate cutter whose tip is recessed in shape is advanced from a movable die side to perform gate cutting.

The Office Action recognizes that JP '685 does not disclose the tip of the gate cutter opposite to have a recessed shape.

Claim 1 recites a recessed portion is formed at a tip of the gate cutter opposite to the projection portion of the sprue bushing. Applicant respectfully disagrees that Shimizu cures the deficiencies of JP '685. Figure 18 of Shimizu discloses the gate cutter 146 having a

recessed tip shape. But a tip of the sprue bushing is not in a projected form. When punching a center hole, a blur or flash of the center hole cannot be produced at the opposite side of the signal transfer surface side. Furthermore, none of the applied references either alone or in combination disclose a recessed portion formed at a tip of the gate cutter opposite to a projection portion of the sprue bushing. As previously discussed, Figure 18 of Shimizu does not disclose a projection portion in the sprue bushing. Instead, the recessed portion is opposite the injection opening 138. Sleeve 147 is not part of the punch 146 in Figure 18. Furthermore in JP '685, Figure 3 discloses that sprue bushing portion 23a and bush portion 33a are opposite each other.

Kudo discloses a stamper on a fixed die. But Kudo's apparatus has a punch 66, 166 for punching a center hole in the disc substrate whose tip is not in a recessed form. As shown in Figures 7-9, Kudo discloses a structure opposite to that of Claim 1. Specifically there is a projected portion at the tip of the sprue bushing and a recessed portion at a tip of the gate cutter (punch). Thus, a blur or flash of the center hole is produced at the edge on the signal transfer surface side, i.e. the stamper holding side.

The dependent claims are allowable for at least the reasons discussed above with respect to independent Claim 1 as well as for the individual features they recite. Withdrawal of the rejections of the dependent claims is respectfully requested.

For the foregoing reasons, it is respectfully submitted that this application is now in condition for allowance. A Notice of Allowance is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact Applicants' undersigned representative at the telephone number listed below.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Bradley D. Lytle
Attorney of Record
Registration No. 40,073

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 06/04)

Michael Britton
Registration No. 47,260

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